

1 **WHAT IS CLAIMED IS:**

2 1. An electrical ratchet wrench comprising:

3 a body composed of two shells each having an outer side and an inner
4 side;

5 a motor received in the body and having an output shaft with a pinion;

6 a battery set detachably received in the body and electrically connected
7 to the motor;

8 a switch electrically connected between the motor and the battery set;

9 a planet gear assembly received in the body and comprising

10 a rotating base rotatably received in the body and having a first side
11 and a second side;

12 a stub protruding from the first side and having a distal end and an
13 engaging hole defined in the distal end;

14 multiple planet gears rotatably attached on the second side of the
15 rotating base and engaging with the pinion on the output shaft of the motor; and

16 a stationary collar securely held in the body and having an outer
17 surface and an inner gear engaging with the planet gears;

18 a connecting collar with an inner surface attached to one end of the body
19 and securely holding the stationary collar in the connecting collar;

20 a head attached to the connecting collar; and

21 a ratcheting device received in the head for driving a fastener to rotate
22 and having a driven shaft extending into and engaging with the engaging hole in
23 the stub on the rotating base.

24 2. The ratchet wrench as claimed in claim 1 further comprising two outer

1 covers attached respectively to the outer sides of the shells; and
2 two inner holders made of an insulating material and attached
3 respectively to the inner sides of the shells to enclose and to hold the motor.

4 3. The ratchet wrench as claimed in claim 2, wherein the switch is
5 received in the body;

6 a button is attached between and exposed from the shells of the body;

7 a resilient strip is received in the body and has two ends connected
8 respectively to the button and the switch; and

9 a biasing member is received in the body to support the button.

10 4. The ratchet wrench as claimed in claim 3, wherein the stationary
11 collar has two ribs longitudinally formed on the outer surface of the stationary
12 collar; and

13 the connecting collar has two recesses defined in the inner surface to
14 respectively receive the ribs on the stationary collar.

15 5. The ratchet wrench as claimed in claim 4 further comprising a holding
16 base received in the body to support the output shaft of the motor.

17 6. The ratchet wrench as claimed in claim 5 further comprising a gasket
18 mounted around the output shaft and located between the planet gears of the
19 planet gear assembly and the holding base to keep the planet gears from touching
20 the holding base.

21 7. The ratchet wrench as claimed in claim 6 further comprising a
22 positioning ring mounted around the head and abutting against one end of the
23 body.

24 8. The ratchet wrench as claimed in claim 7, wherein each shell has a

1 neck protruding from the shell at the end to which the head is attached; and
2 a holding ring is mounted around the necks on the shells.

3 9. The ratchet wrench as claimed in claim 7, wherein one of the shells
4 has an annular neck formed on the shell at the end to which the head is attached;
5 and

6 the shell with the neck has a length longer than that of the other shell.

7 10. The ratchet wrench as claimed in claim 7, wherein the head has an
8 outer thread;

9 the connecting collar has an inner thread screwing with the outer thread
10 on the head; and

11 the positioning ring has an inner thread screwing with the outer thread
12 on the head.

13 11. The ratchet wrench as claimed in claim 1, wherein the switch is
14 received in the body;

15 a button is attached between and exposed from the shells of the body;

16 a resilient strip is received in the body and has two ends connected
17 respectively to the button and the switch; and

18 a biasing member is received in the body to support the button.

19 12. The ratchet wrench as claimed in claim 1, wherein the stationary
20 collar has two ribs longitudinally formed on the outer surface of the stationary
21 collar; and

22 the connecting collar has two recesses defined in the inner surface to
23 respectively receive the ribs on the stationary collar.

24 13. The ratchet wrench as claimed in claim 1 further comprising a

1 holding base received in the body to support the output shaft of the motor.

2 14. The ratchet wrench as claimed in claim 13 further comprising a
3 gasket mounted around the output shaft and located between the planet gears of
4 the planet gear assembly and the holding base to keep the planet gears from
5 touching the holding base.

6 15. The ratchet wrench as claimed in claim 1 further comprising a
7 positioning ring mounted around the head and abutting against one end of the
8 body.

9 16. The ratchet wrench as claimed in claim 15, wherein the head has an
10 outer thread;

11 the connecting collar has an inner thread screwing with the outer thread
12 on the head; and

13 the positioning ring has an inner thread screwing with the outer thread
14 on the head.

15 17. The ratchet wrench as claimed in claim 1, wherein each shell has a
16 neck protruding from the shell at the end to which the head is attached; and

17 a holding ring is mounted around the necks on the shells.

18 18. The ratchet wrench as claimed in claim 1, wherein one of the shells
19 has an annular neck formed on the shell at the end to which the head is attached;
20 and

21 the shell with the neck has a length longer than that of the other shell.